

WHAT IS CLAIMED IS:

1. A print server apparatus capable of receiving  
a print job to be printed from an information  
processing apparatus through a network, the printer  
5 server apparatus comprising:

reservation job management means for storing, in a  
memory, reservation job data prepared by uniting print  
data to be printed by a printing apparatus and print  
job information, received from said information  
10 processing apparatus, and managing said reservation job  
data even after completion of the printing process by  
said printing apparatus; and

output control means for outputting the  
reservation job data managed by said reservation job  
15 management means to the exterior, according to a  
request for re-printing received from said information  
processing apparatus.

2. A print server apparatus according to claim 1,  
20 wherein said reservation job management means is  
adapted to reserve the reservation job data transmitted  
from said information processing apparatus for a  
designated period and to delete said reservation job  
data from said memory after the lapse of said  
25 designated period.

3. A print server apparatus according to claim 1,

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further comprising discrimination means for  
discriminating whether the management of said  
reservation job data by said reservation job management  
means is possible, in response to a request for  
5 reservation from said information processing apparatus;

wherein said reservation job management means  
executes reservation and management of said reservation  
job data in case said discrimination means identifies  
that the management of said reservation job data is  
10 possible.

4. A print server apparatus according to claim 3,  
wherein, in case said discrimination means identifies  
that the management of said reservation job data is not  
15 possible, said reservation job management means  
registers and manages the print job ID and the  
reservation job size, requested for reservation, in a  
reservation waiting list.

20 5. A print server apparatus according to claim 4,  
further comprising detection means for detecting a  
registerable print job ID by comparing the available  
capacity of said memory with the reservation job sizes  
registered in said reservation waiting list.

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6. A print server apparatus according to claim 1,  
wherein:

said reservation job management means manages  
print data of a device-dependent data format and  
intermediate data of a device-independent data format;  
and

5           in case the location of printing indicated by a  
re-print request received from said information  
processing apparatus is a printing apparatus of a type  
same as that of the printing apparatus executing the  
original printing, said output control means outputs  
10   the device-dependent print data managed by said  
reservation job management means to the exterior, but,  
in case the location of printing indicated by the re-  
print request received from said information processing  
apparatus is a printing apparatus of a type different  
15   from that of the printing apparatus executing the  
original printing, said output control means outputs  
the device-independent intermediate data managed by  
said reservation job management means to the exterior.

20           7. A print server apparatus according to claim 6,  
wherein said intermediate data are EMF data and said  
print data are RAW data.

25           8. An information processing apparatus for  
generating print data to be printed by a printing  
apparatus through a network, the information processing  
apparatus comprising:

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print data generation means for generating the  
print data to be printed by said printing apparatus;

reservation data generation means for generating  
reservation job data consisting of said print data and  
5 print job information based on said print data and to  
be reserved after the completion of the printing  
process of said print data by said printing apparatus;  
and

transmission control means for transmitting the  
10 reservation job data, generated by said reservation  
data generation means, to a print job management  
apparatus through the network.

9. An information processing apparatus according  
15 to claim 8, further comprising condition designation  
means for designating a reservation condition for  
causing said print job management apparatus to reserve  
the reservation job data.

20 10. An information processing apparatus according  
to claim 9, wherein said reservation condition is a  
period of reservation.

25 11. An information processing apparatus according  
to claim 9, wherein said reservation condition is a  
number of printing times.

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12. An information processing apparatus according to claim 8, wherein said reservation data generation means generates reservation data including said print data of a device-dependent data format and intermediate data of a device-independent data format.

13. An information processing apparatus according to claim 12, further comprising:

acquisition means for acquiring a list of managed reservation data from said print job management apparatus; and

re-print designation means for designating the reservation data to be re-printed from said acquired list of the reservation data.

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14. An information processing apparatus according to claim 13, wherein, in case of receiving the intermediate data from said print job management means according to a re-printing instruction by said re-print

designation means, print data generation means corresponding to the printing apparatus to be used for re-printing is selected among plural print data generation means, and the print data for said printing apparatus to be used for re-printing are generated from said intermediate data.

15. An information processing apparatus according

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to claim 14, wherein the print data generated at the re-printing of the intermediate data are reserved again as the reservation job data in said print job management apparatus.

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16. A method for use in a print server apparatus capable of receiving a print job to be printed from an information processing apparatus through a network, the method comprising:

10 a reservation job management step of storing, in a memory, reservation job data prepared by uniting print data to be printed by a printing apparatus and print job information, received from said information processing apparatus, and managing said reservation job data even after completion of the printing process by said printing apparatus; and

15 an output control step of outputting the reservation job data managed by said reservation job management step to the exterior, according to a request for re-printing received from said information processing apparatus.

20 17. A method according to claim 16, wherein said reservation job management step is adapted to reserve the reservation job data transmitted from said information processing apparatus for a designated period and to delete said reservation job data from

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said memory after the lapse of said designated period.

18. A method according to claim 16, further comprising a discrimination step of discriminating whether the management of said reservation job data by said reservation job management step is possible, in response to a request for reservation from said information processing apparatus;

wherein said reservation job management step executes reservation and management of said reservation job data in case said discrimination step identifies that the management of said reservation job data is possible.

19. A method according to claim 18, wherein, in case said discrimination step identifies that the management of said reservation job data is not possible, said reservation job management step registers and manages the print job ID and the reservation job size, requested for reservation, in a reservation waiting list.

20. A method according to claim 19, further comprising a detection step of detecting a registerable print job ID by comparing the available capacity of said memory with the reservation job sizes registered in said reservation waiting list.

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21. A method according to claim 16, wherein:

said reservation job management step manages print data of a device-dependent data format and intermediate data of a device-independent data format; and

5 in case the location of printing indicated by a re-print request received from said information processing apparatus is a printing apparatus of a type same as that of the printing apparatus executing the original printing, said output control means outputs  
10 the device-dependent print data managed by said reservation job management means to the exterior, but, in case the location of printing indicated by the re-print request received from said information processing apparatus is a printing apparatus of a type different  
15 from that of the printing apparatus executing the original printing, said output control means outputs the device-independent intermediate data managed by said reservation job management means to the exterior.

20 22. A method according to claim 21, wherein said intermediate data are EMF data and said print data are RAW data.

23. An information processing method for  
25 generating print data to be printed by a printing apparatus through a network, the method comprising:  
a print data generation step of generating the

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print data to be printed by said printing apparatus;

5 a reservation data generation step of generating reservation job data consisting of said print data and print job information based on said print data and to be reserved after the completion of the printing process of said print data by said printing apparatus; and

10 a transmission control step of transmitting the reservation job data, generated by said reservation data generation step, to a print job management apparatus through the network.

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24. An information processing method according to claim 23, further comprising a condition designation  
15 step of designating a reservation condition for causing said print job management apparatus to reserve the reservation job data.

25. An information processing method according to claim 24, wherein said reservation condition is a  
20 period of reservation.

26. An information processing method according to claim 24, wherein said reservation condition is a  
25 number of printing times.

27. An information processing method according to

claim 23, wherein said reservation data generation step generates reservation data including said print data of a device-dependent data format and intermediate data of a device-independent data format.

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28. An information processing method according to claim 27, further comprising:

an acquisition step of acquiring a list of managed reservation data from said print job management apparatus; and

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a re-print designation step of designating the reservation data to be re-printed from said acquired list of the reservation data.

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29. An information processing method according to claim 28, wherein, in case of receiving the intermediate data from said print job management step according to a re-printing instruction by said re-print designation step, print data generation means

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corresponding to the printing apparatus to be used for re-printing is selected among plural print data generation means, and the print data for said printing apparatus to be used for re-printing are generated from said intermediate data.

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30. An information processing method according to claim 29, wherein the print data generated at the

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re-printing of the intermediate data are reserved again as the reservation job data in said print job management apparatus.

5           31. A computer readable memory medium storing a program of a method for use in a print server apparatus capable of receiving a print job to be printed from an information processing apparatus through a network, the program comprising:

10           a reservation job management step of storing, in a memory, reservation job data prepared by uniting print data to be printed by a printing apparatus and print job information, received from said information processing apparatus, and managing said reservation job data even after completion of the printing process by  
15           said printing apparatus; and

            an output control step of outputting the reservation job data managed by said reservation job management step to the exterior, according to a request  
20           for re-printing received from said information processing apparatus.

            32. A memory medium according to claim 31, wherein said reservation job management step is adapted  
25           to reserve the reservation job data transmitted from said information processing apparatus for a designated period and to delete said reservation job data from

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said memory after the lapse of said designated period.

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5 33. A memory medium according to claim 31, the program further comprising a discrimination step of discriminating whether the management of said reservation job data by said reservation job management step is possible, in response to a request for reservation from said information processing apparatus; wherein said reservation job management step

10 executes reservation and management of said reservation job data in case said discrimination step identifies that the management of said reservation job data is possible.

15 34. A memory medium according to claim 33, wherein, in case said discrimination step identifies that the management of said reservation job data is not possible, said reservation job management step registers and manages the print job ID and the

20 reservation job size, requested for reservation, in a reservation waiting list.

25 35. A memory medium according to claim 34, the program further comprising a detection step of detecting a registerable print job ID by comparing the available capacity of said memory with the reservation job sizes registered in said reservation waiting list.

36. A memory medium according to claim 31,  
wherein:

5       said reservation job management step manages print  
data of a device-dependent data format and intermediate  
data of a device-independent data format; and  
in case the location of printing indicated by a  
re-print request received from said information  
processing apparatus is a printing apparatus of a type  
same as that of the printing apparatus executing the  
10       original printing, said output control step outputs the  
device-dependent print data managed in said reservation  
job management steps to the exterior, but, in case the  
location of printing indicated by the re-print request  
received from said information processing apparatus is  
15       a printing apparatus of a type different from that of  
the printing apparatus executing the original printing,  
said output control step outputs the device-independent  
intermediate data managed in said reservation job  
management step to the exterior.

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37. A memory medium according to claim 36,  
wherein said intermediate data are EMF data and said  
print data are RAW data.

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38. A computer readable memory medium storing a  
program of an information processing method for  
generating print data to be printed by a printing

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apparatus through a network, the program comprising:

a print data generation step of generating the print data to be printed by said printing apparatus;

5 a reservation data generation step of generating reservation job data consisting of said print data and print job information based on said print data and to be reserved after the completion of the printing process of said print data by said printing apparatus; and

10 a transmission control step of transmitting the reservation job data, generated by said reservation data generation step, to a print job management apparatus through the network.

15 39. A memory medium according to claim 38, the program further comprising a condition designation step of designating a reservation condition for causing said print job management apparatus to reserve the reservation job data.

20 40. A memory medium according to claim 39, wherein said reservation condition is a period of reservation.

25 41. A memory medium according to claim 39, wherein said reservation condition is a number of printing times.

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42. A memory medium according to claim 38,  
wherein said reservation data generation step generates  
reservation data including said print data of a device-  
dependent data format and intermediate data of a  
5 device-independent data format.

43. A memory medium according to claim 42, the  
program further comprising:

an acquisition step of acquiring a list of managed  
10 reservation data from said print job management  
apparatus; and

a re-print designation step of designating the  
reservation data to be re-printed from said acquired  
list of the reservation data.  
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44. A memory medium according to claim 43,  
wherein, in case of receiving the intermediate data  
from said print job management step according to a re-  
printing instruction by said re-print designation step,  
20 print data generation means corresponding to the  
printing apparatus to be used for re-printing is  
selected among plural print data generation means, and  
the print data for said printing apparatus to be used  
for re-printing are generated from said intermediate  
25 data.

45. A memory medium according to claim 44,

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wherein the print data generated at the re-printing of the intermediate data are reserved again as the reservation job data in said print job management apparatus.

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46. A computer program of a method for use in a print server apparatus capable of receiving a print job to be printed from an information processing apparatus through a network, the program comprising:

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a reservation job management step of storing, in a memory reservation job data prepared by uniting print data to be printed by a printing apparatus and print job information, received from said information processing apparatus, and managing said reservation job

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data even after completion of the printing process by said printing apparatus; and

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an output control step of outputting the reservation job data managed by said reservation job management step to the exterior, according to a request for re-printing received from said information processing apparatus.

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47. A computer program according to claim 46, wherein said reservation job management step is adapted to reserve the reservation job data transmitted from said information processing apparatus for a designated period and to delete said reservation job data from

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said memory after the lapse of said designated period.

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5        48. A computer program according to claim 46,  
further comprising a discrimination step of  
discriminating whether the management of said  
reservation job data by said reservation job management  
step is possible, in response to a request for  
reservation from said information processing apparatus;  
wherein said reservation job management step  
10       executes reservation and management of said reservation  
job data in case said discrimination step identifies  
that the management of said reservation job data is  
possible.

15       49. A computer program according to claim 48,  
wherein, in case said discrimination step identifies  
that the management of said reservation job data is not  
possible, said reservation job management step  
registers and manages the print job ID and the  
20       reservation job size, requested for reservation, in a  
reservation waiting list.

25       50. A computer program according to claim 49, the  
program further comprising a detection step of  
detecting a registerable print job ID by comparing the  
available capacity of said memory with the reservation  
job sizes registered in said reservation waiting list.

51. A computer program according to claim 46,  
wherein:

5 said reservation job management step manages print  
data of a device-dependent data format and intermediate  
data of a device-independent data format; and  
in case the location of printing indicated by a  
re-print request received from said information  
processing apparatus is a printing apparatus of a type  
same as that of the printing apparatus executing the  
10 original printing, said output control step outputs the  
device-dependent print data managed in said reservation  
job management step to the exterior, but, in case the  
location of printing indicated by the re-print request  
received from said information processing apparatus is  
15 a printing apparatus of a type different from that of  
the printing apparatus executing the original printing,  
said output control step outputs the device-independent  
intermediate data managed in said reservation job  
management step to the exterior.

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52. A computer program according to claim 51,  
wherein said intermediate data are EMF data and said  
print data are RAW data.

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53. A computer program of an information  
processing method for generating print data to be  
printed by a printing apparatus through a network, the

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program comprising:

a print data generation step of generating the print data to be printed by said printing apparatus;

5 a reservation data generation step of generating reservation job data consisting of said print data and print job information based on said print data and to be reserved after the completion of the printing process of said print data by said printing apparatus; and

10 a transmission control step of transmitting the reservation job data, generated by said reservation data generation step, to a print job management apparatus through the network.

15 54. A computer program according to claim 53, further comprising a condition designation step of designating a reservation condition for causing said print job management apparatus to reserve the reservation job data.

20 55. A computer program according to claim 54, wherein said reservation condition is a period of reservation.

25 56. A computer program according to claim 54, wherein said reservation condition is a number of printing times.

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57. A computer program according to claim 53,  
wherein said reservation data generation step generates  
reservation data including said print data of a device-  
dependent data format and intermediate data of a  
5 device-independent data format.

58. A computer program according to claim 57,  
further comprising:

an acquisition step of acquiring a list of managed  
10 reservation data from said print job management  
apparatus; and

a re-print designation step of designating the  
reservation data to be re-printed from said acquired  
list of the reservation data.

15 59. A computer program according to claim 58,  
wherein, in case of receiving the intermediate data  
from said print job management step according to a re-  
printing instruction by said re-print designation step,  
20 print data generation means corresponding to the  
printing apparatus to be used for re-printing is  
selected among plural print data generation means, and  
the print data for said printing apparatus to be used  
for re-printing are generated from said intermediate  
25 data.

60. A computer program according to claim 59,

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wherein the print data generated at the re-printing of the intermediate data are reserved again as the reservation job data in said print job management apparatus.

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